=> d his

(FILE 'HOME' ENTERED AT 15:25:28 ON 25 FEB 2002)

FILE 'MEDLINE, CAPLUS, BIOSIS, SCISEARCH' ENTERED AT 15:25:44 ON 25 FEB 2002

L1 7078 S ADENO-ASSOCIATED(W)VIRUS OR AAV
L2 21697 S CARDIOMYOCYTE
L3 23 S L1 AND L2
L4 12 DUP REM L3 (11 DUPLICATES REMOVED)

=> d au ti so ab 1-12 l4

L4 ANSWER 1 OF 12 CAPLUS COPYRIGHT 2002 ACS DUPLICATE 1
AU Kawada, Tomie; Nakazawa, Mikio; Nakauchi, Sakura; Yamazaki, Ken; Shimamoto, Ryoichi; Urabe, Masashi; Nakata, Jumi; Hemmi, Chieko; Masui, Fujiko; Nakajima, Toshiaki; Suzuki, Jun-Ichi; Monahan, John; Sato, Hiroshi; Masaki, Tomoh; Ozawa, Keiya; Toyo-Oka, Teruhiko
TI Rescue of hereditary form of dilated cardiomyopathy by rAAV-mediated somatic gene therapy: amelioration of morphological findings, sarcolemmal permeability, cardiac performances, and the prognosis of TO-2 hamsters
SO Proceedings of the National Academy of Sciences of the United States of America (2002), 99(2), 901-906
CODEN: PNASA6; ISSN: 0027-8424
AB The hereditary form comprises .apprxeq.1/5 of patients with dilated cardiomyopathy (DCM) and is a major cause of advanced heart failure. Medical and socioeconomic settings require novel treatments other than cardiac transplantation. TO-2 strain hamsters with congenital DCM show similar clin. and genetic backgrounds to human cases that have defects in the .delta.-sarcoglycan (.delta.-SG) gene. To examine the long-term in vivo supplement of normal .delta.-SG gene driven by cytomegalovirus promoter, we analyzed the pathophysiol. effects of the transgene expression in TO-2 hearts by using recombinant **adeno-assocd. virus** vector. The transgene preserved sarcolemmal permeability detected in situ by mutual exclusivity between **cardiomyocytes** taking up i.v. administered Evans blue dye and expressing the .delta.-SG transgene throughout life. The persistent amelioration of sarcolemmal integrity improved wall thickness and the calcification score postmortem. Furthermore, in vivo myocardial contractility and hemodynamics, measured by echocardiog. and cardiac catheterization, resp., were normalized, esp. in the diastolic performance. Most importantly, the survival period of the TO-2 hamsters was prolonged after the .delta.-SG gene transduction, and the animals remained active, exceeding the life expectancy of animals without transduction of the responsible gene. These results provide the first evidence that somatic gene therapy is promising for human DCM treatment, if the rAAV vector can be justified for clin. use.

L4 ANSWER 2 OF 12 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
AU Kawada, Tomie (1); Nakazawa, Mikio; Toyo-oka, Teruhiko
TI Somatic gene therapy of dilated cardiomyopathy.
SO Folia Pharmacologica Japonica, (January, 2002) Vol. 119, No. 1, pp. 37-44.
print.
ISSN: 0015-5691.
AB The hereditary form of dilated cardiomyopathy (DCM) accounts for about 20%
of human DCM and is a major cause of heart failure. TO-2 strain hamsters show DCM, a gene deletion of delta-sarcoglycan (SG), loss of all four SGs,

alpha-, beta-, gamma- and delta-SG proteins, and are useful for developing gene therapy of the hereditary DCM. The delta-SG is a component of dystrophin-associated glycoprotein complex that stabilizes sarcolemma. Four familial and sporadic DCM cases have been reported in human patients with the same delta-SG gene mutation. To establish the potential gene therapy of DCM, efficient and long-lasting transduction of the responsible gene is mandatory, especially for improving the functional defect. Recombinant **adeno-associated virus** (rAAV) vector with delta-SG gene was intramurally transfected to the TO-2 hearts at 5-weeks-old. The transfected myocardium revealed robust expression of both transcript and transgene after 10 and 20 weeks. Immunohistological analyses demonstrated re-expression of not only delta-SG but also the other SGs and normalization of the diameter of transduced **cardiomyocytes** without the pathogenicity. Hemodynamic studies revealed preferential amelioration of the diastolic indices. It suggests a novel strategy for the treatment of DCM and the rAAV vector is available for the treatment of several human diseases because of its safety and efficacy.

L4 ANSWER 3 OF 12 MEDLINE DUPLICATE 2
AU Kawada T; Sakamoto A; Nakazawa M; Urabe M; Masuda F; Hemmi C; Wang Y; Shin W S; Nakatsuru Y; Sato H; Ozawa K; Toyo-oka T
TI Morphological and physiological restorations of hereditary form of dilated cardiomyopathy by somatic gene therapy.
SO BIOCHEMICAL AND BIOPHYSICAL RESEARCH COMMUNICATIONS, (2001 Jun 8) 284 (2) 431-5.
Journal code: 9Y8; 0372516. ISSN: 0006-291X.
AB TO-2 strain hamsters with dilated cardiomyopathy, gene deletion of delta-sarcoglycan (SG) and no expression of alpha-, beta-, gamma-, and delta-SG proteins are useful for developing the potential gene therapy of intractable heart failure. We prepared recombinant **adeno-associated virus** vector including normal delta-SG gene driven by CMV promoter and intramurally administered in vivo. The transfected myocardium induced robust expression of both transcript and transgene for 2/3 period of the animal's life expectancy. Immunostaining demonstrated reexpression of not only delta-SG but also other three SGs in 40% cells in the transfected region and normalization of the diameter of transduced **cardiomyocytes**. Hemodynamic study revealed preferential amelioration of the diastolic indices (LVEDP, the dP/dt(min) and CVP). These results provide the first evidence that supplementation of a specific gene with efficient and sustained transfection capability restores the genetic, morphological, and functional deteriorations.

L4 ANSWER 4 OF 12 CAPLUS
AU Gao, Wenqian; Li, Xiaoying; Wu, Xiaobing; Pei, Xuetao; Li, Liang
TI Study on transfected **cardiomyocytes** by recombinant adenovirus and **adeno-associated virus**
SO Zhongguo Yingyong Shenglixue Zazhi (2001), 17(2), 157-160
CODEN: ZYSZE2; ISSN: 1000-6834
AB Recombinant adenovirus (rAd) and **adeno-assocd. virus** were created, in which .beta.2-adrenergic receptors (.beta.2- AR) gene is under control of the cmv promotor, the cultured

neonate rat ventricular myocytes were infected by the two vectors, and the expression of .beta.2-AR on cultured neonate rat ventricular myocytes was assessed. RT-PCR demonstrated the presence of .beta.2-AR mRNA, protein immunoblots demonstrated the expression of the .beta.2-AR gene. According to a ligand binding assay, the d. of .beta.--AR in the **cardiomyocytes** infected by rAd and rAAV had no difference, which was greater than that in the control. The results demonstrated that rAd vector and **AAV** vector transfected efficiently **cardiomyocytes**.

L4 ANSWER 5 OF 12 SCISEARCH COPYRIGHT 2002 ISI (R)
AU Aikawa R (Reprint); Snyder R; Huggins G S
TI **Cardiomyocyte**-specific gene expression by recombinant **adeno-associated virus** containing the alpha myosin heavy chain promoter and enhancer
SO CIRCULATION, (23 OCT 2001) Vol. 104, No. 17, Supp. [S], pp. 116-116. MA 560.
Publisher: LIPPINCOTT WILLIAMS & WILKINS, 530 WALNUT ST, PHILADELPHIA, PA 19106-3621 USA.
ISSN: 0009-7322.

L4 ANSWER 6 OF 12 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.DUPLICATE 3
AU Gao Wen-qian (1); Li Xiaoying (1); Wu Xiao-bing (1)
TI The study of beta2-AR and EGFP gene transferred into **cardiomyocytes** by **AAV** vector.
SO Journal of Molecular and Cellular Cardiology, (June, 2001) Vol. 33, No. 6, pp. A37. print.
Meeting Info.: XVII ISHR World Congress of the International Society for Heart Research Winnipeg, Canada July 06-11, 2001
ISSN: 0022-2828.

L4 ANSWER 7 OF 12 MEDLINE DUPLICATE 4
AU Maeda Y; Ikeda U; Oya K; Shimpo M; Ueno S; Urabe M; Kume A; Monahan J; Ozawa K; Shimada K
TI **Adeno-associated virus**-mediated transfer of endothelial nitric oxide synthase gene inhibits protein synthesis of rat ventricular **cardiomyocytes**.
SO CARDIOVASCULAR DRUGS AND THERAPY, (2001 Jan) 15 (1) 19-24.
Journal code: 8712220. ISSN: 0920-3206.
AB We investigated whether nitric oxide (NO) synthase gene transfer could attenuate growth of cultured cardiac myocytes. First, we investigated the effects of exogenous NO and cGMP analog on protein synthesis of cultured neonatal rat cardiac myocytes. The NO donor 3-morpholino-sydnonimine-hydrochloride (SIN-1) and 8-bromo-cGMP caused concentration-dependent decreases in phenylephrine-stimulated incorporation of 3H-leucine into cardiac myocytes. We then transferred endothelial constitutive NO synthase (ecNOS) gene into cultured neonatal rat cardiac myocytes using **adeno-associated virus** (**AAV**) vectors. ecNOS gene transfer into cardiac myocytes induced 140 kD ecNOS protein expression and significantly increased cGMP contents of myocytes compared with control cells. ecNOS gene transfer inhibited 3H-leucine incorporation into cardiac myocytes in response to phenylephrine, which was significantly recovered in the presence of the NOS inhibitor N(G)-monomethyl-L-arginine acetate. These results indicate that endogenously generated NO by ecNOS gene transfer using **AAV**

vectors inhibits the alpha-adrenergic agonist-induced cardiac protein synthesis at least partially via cGMP production.

L4 ANSWER 8 OF 12 CAPLUS COPYRIGHT 2002 ACS
IN Leiden, Jeffrey M.; Svensson, Eric
TI Efficient and stable in vivo gene transfer to **cardiomyocytes** using recombinant **adeno-associated virus** vectors
SO PCT Int. Appl., 20 pp.
CODEN: PIXXD2
AB Recombinant **adeno-assocd. virus** (rAAV) vectors are used to transduce **cardiomyocytes** in vivo by infusing the rAAV into a coronary artery or coronary sinus. RAAV infection is not assocd. with detectable myocardial inflammation or myocyte necrosis. Thus, rAAV is a useful vector for the stable expression of therapeutic genes in the myocardium and can be used to deliver genes for inducing angiogenesis, inhibiting angiogenesis, stimulating cell proliferation, inhibiting cell proliferation and/or treating or ameliorating other cardiovascular conditions.

L4 ANSWER 9 OF 12 CAPLUS COPYRIGHT 2002 ACS
IN Chien, Kenneth R.; Wang, Yibin; Evans, Sylvia
TI Adenovirus vector for heart-specific gene expression and its use in gene therapy
SO PCT Int. Appl., 33 pp.
CODEN: PIXXD2
AB A human type-5 recombinant adenovirus vector Ad/CG/ITR for heart-specific gene expression is constructed by using the promoter from the **cardiomyocyte**-restricted cardiac ankyrin repeat protein (CARP)in combination of the inverted terminal repeat (ITR) sequences from human **adeno-assocd. virus** (**AAV**). Using green fluorescent protein (GFP) as a marker gene, Ad/CG/ITR is shown to direct transgene expression to myocardial tissue in cultured cell lines, in the injected heart muscle and in developing mouse embryos (by microinjection into cardiac cavities). The inclusion of **AAV** ITR is required for tissue-specific expression and the gene expression is regulated at the transcription level. The promoters of other cardiac restricted genes are also suggested. These cardiac-specific adenovirus vector can be used in gene therapy of heart diseases.

L4 ANSWER 10 OF 12 CAPLUS COPYRIGHT 2002 ACS
IN Chao, Lee; Chao, Julie
TI Treatment of cardiac and renal disorders with atrial natriuretic peptide and tissue kallikrein gene therapy
SO PCT Int. Appl., 120 pp.
CODEN: PIXXD2
AB The invention provides methods for delivering tissue kallikrein (a serine proteinase) and atrial natriuretic peptide (a hormone secreted by atrial **cardiomyocytes**) genes to cells via gene therapy mechanisms for the treatment of non-hypertension assocd. renal and cardiac disorders. Treatment occurs via administration of the invention to a subject having a non-hypertension assocd. renal or cardiac disorder under conditions whereby the nucleic acid is expressed.

L4 ANSWER 11 OF 12 CAPLUS COPYRIGHT 2002 ACS
IN Podsakoff, Gregory M.; Kessler, Paul D.; Byrne, Barry J.; Kurtzman, Gary J.
TI **Adeno-associated virus** vectors for gene therapy of muscle disease

SO U.S., 27 pp., Cont.-in-part of U.S. Ser. No. 588,355.
CODEN: USXXAM

AB The use of recombinant **adeno-assocd. virus** (**AAV**) virions for delivery of therapeutic genes to muscle is disclosed. The invention allows for the direct, in vivo injection of recombinant **AAV** virions into muscle tissue, as well as for the in vitro transduction of muscle cells that can subsequently be introduced into a subject for treatment. The invention provides for sustained, high-level expression of the delivered gene and for in vivo secretion of the therapeutic protein from transduced muscle cells such that systemic delivery is achieved. **Adeno-assocd. virus** can transform myocytes and **cardiomyocytes** with a lacZ reporter gene in vitro. Transformation of mouse myotubes and myoblasts with a virus carrying the human erythropoietin gene led to the synthesis of the protein by transformed cells for 6-8 wk. I.m. injection was mor effective at transformation of muscle cells and tissues than was i.v. injection. Use of an **AAV** vector to deliver an acid .alpha.-glucosidase gene that could be used for therapy of cardiomyopathy assocd. with glycogen storage diseases is described. Mice inoculated i.m. with the virus produced elevated levels of the enzyme for 10 wk.

L4 ANSWER 12 OF 12 MEDLINE DUPLICATE 5

AU Svensson E C; Marshall D J; Woodard K; Lin H; Jiang F; Chu L; Leiden J M

TI Efficient and stable transduction of **cardiomyocytes** after intramyocardial injection or intracoronary perfusion with recombinant **adeno-associated virus** vectors.

SO CIRCULATION, (1999 Jan 19) 99 (2) 201-5.
Journal code: DAW; 0147763. ISSN: 1524-4539.

AB BACKGROUND: The delivery of recombinant genes to **cardiomyocytes** holds promise for the treatment of a variety of cardiovascular diseases. Previous gene transfer approaches that used direct injection of plasmid DNA or replication-defective adenovirus vectors have been limited by low transduction frequencies and transient transgene expression due to immune responses, respectively. In this report, we have tested the feasibility of using intramyocardial injection or intracoronary infusions of recombinant **adeno-associated virus** (rAAV) vectors to program transgene expression in murine **cardiomyocytes** in vivo. METHODS AND RESULTS: We constructed an rAAV containing the LacZ gene under the transcriptional control of the cytomegalovirus (CMV) promoter (AAVCMV-LacZ). We then injected 1x10(8) infectious units (IU) of this virus into the left ventricular myocardium of adult CD-1 mice. Control hearts were injected with the AdCMV-LacZ adenovirus vector. Hearts harvested 2, 4, and 8 weeks after AAVCMV-LacZ injection demonstrated stable beta-galactosidase (beta-gal) expression in large numbers of **cardiomyocytes** without evidence of myocardial inflammation or myocyte necrosis. In contrast, the AdCMV-LacZ-injected hearts displayed transient beta-gal expression, which was undetectable by 4 weeks after injection. Explanted C57BL/6 mouse hearts were also perfused via the coronary arteries with 1.5x10(9) IU of AAVCMV-LacZ and assayed 2, 4, and 8 weeks later for beta-gal expression. beta-Gal expression was detected in <1% of **cardiomyocytes** at 2 weeks after perfusion but was detected in up to 50% of **cardiomyocytes** 4 to 8 weeks after perfusion. CONCLUSIONS: Direct intramyocardial injection or coronary artery perfusion with rAAV vectors can be used to program stable transgene expression in **cardiomyocytes** in vivo. rAAV appears to represent

a useful vector for the delivery of therapeutic genes to the myocardium.

=> d bib 8-11 l4

L4 ANSWER 8 OF 12 CAPLUS COPYRIGHT 2002 ACS
AN 2000:456818 CAPLUS
DN 133:53712
TI Efficient and stable in vivo gene transfer to **cardiomyocytes** using recombinant **adeno-associated virus** vectors
IN Leiden, Jeffrey M.; Svensson, Eric
PA Arch Development Corp., USA
SO PCT Int. Appl., 20 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2000038518	A1	20000706	WO 1999-US31093	19991228
	W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
	RW: GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
	EP 1139751	A1	20011010	EP 1999-967703	19991228
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
PRAI	US 1998-113923	P	19981228		
	WO 1999-US31093	W	19991228		

RE.CNT 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 9 OF 12 CAPLUS COPYRIGHT 2002 ACS
AN 2000:191240 CAPLUS
DN 132:247147
TI Adenovirus vector for heart-specific gene expression and its use in gene therapy
IN Chien, Kenneth R.; Wang, Yibin; Evans, Sylvia
PA Regents of the University of California, USA
SO PCT Int. Appl., 33 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2000015821	A1	20000323	WO 1999-US20730	19990910
	W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
	RW: GH, GM, KE, LS, MW, SD, SL, SZ, UG, ZW, AT, BE, CH, CY, DE, DK,				

ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG

	AU 9958195	A1	20000403	AU 1999-58195	19990910
	EP 1109925	A1	20010627	EP 1999-945628	19990910
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				
PRAI	US 1998-99960	P	19980911		
	WO 1999-US20730	W	19990910		

RE.CNT 8 THERE ARE 8 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 10 OF 12 CAPLUS COPYRIGHT 2002 ACS
AN 1999:194029 CAPLUS
DN 130:232527
TI Treatment of cardiac and renal disorders with atrial natriuretic peptide and tissue kallikrein gene therapy
IN Chao, Lee; Chao, Julie
PA MUSC Foundation for Research Development, USA
SO PCT Int. Appl., 120 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9912576	A2	19990318	WO 1998-US19267	19980911
	WO 9912576	A3	19990603		
	W: AU, CA, JP, US				
	RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
	AU 9894876	A1	19990329	AU 1998-94876	19980911
PRAI	US 1997-58511		19970911		
	WO 1998-US19267		19980911		

L4 ANSWER 11 OF 12 CAPLUS COPYRIGHT 2002 ACS
AN 1999:635437 CAPLUS
DN 131:253345
TI **Adeno-associated virus** vectors for gene therapy of muscle disease
IN Podsakoff, Gregory M.; Kessler, Paul D.; Byrne, Barry J.; Kurtzman, Gary J.
PA Avigen, Inc., USA; Johns Hopkins University
SO U.S., 27 pp., Cont.-in-part of U.S. Ser. No. 588,355.
CODEN: USXXAM
DT Patent
LA English
FAN.CNT 4

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 5962313	A	19991005	US 1997-784757	19970116
	US 5858351	A	19990112	US 1996-588355	19960118
	CA 2243261	AA	19970724	CA 1997-2243261	19970117
	WO 9726337	A1	19970724	WO 1997-US895	19970117
	W: CA, JP				
	RW: AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
	EP 874904	A1	19981104	EP 1997-904823	19970117
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				
	US 6211163	B1	20010403	US 1999-309042	19990510

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     US 6335011          B1    20020101        US 1999-406362    19990928
     US 2001001661       A1    20010524        US 2001-755734    20010104
PRAI US 1996-588355      A2    19960118
     US 1997-784757      A     19970116
     WO 1997-US895       W     19970117
     US 1999-226989      A1    19990107
     US 1999-309042      A1    19990510
RE.CNT  30     THERE ARE 30 CITED REFERENCES AVAILABLE FOR THIS RECORD
               ALL CITATIONS AVAILABLE IN THE RE FORMAT

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Search Results -

Terms	Documents
l1 with l2	9

Database: US Patents Full-Text Database; US Pre-Grant Publication Full-Text Database; JPO Abstracts Database; EPO Abstracts Database; Derwent World Patents Index; IBM Technical Disclosure Bulletins

Search: L4

Refine Search

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Search History

DATE: Monday, February 25, 2002 Printable Copy Create Case

Set Name side by side	Query	Hit Count	Set Name result set
DB=USPT,PGPB; PLUR=YES; OP=AND			
L4	l1 with l2	9	L4
L3	L2 and l1	117	L3
L2	cardiomyocyte or myocardium	4925	L2
L1	(adeno-associated adj virus) or AAV	2040	L1

END OF SEARCH HISTORY

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Search Results - Record(s) 1 through 9 of 9 returned.

☐ 1. Document ID: US 20010016193 A1

L4: Entry 1 of 9 File: PGPB Aug 23, 2001

PGPUB-DOCUMENT-NUMBER: 20010016193
PGPUB-FILING-TYPE: new
DOCUMENT-IDENTIFIER: US 20010016193 A1

TITLE: Methods of altering cardiac cell phenotype

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | Claims | KWIC | Draw Desc | Image

☑ 2. Document ID: US 20010001661 A1

L4: Entry 2 of 9 File: PGPB May 24, 2001

PGPUB-DOCUMENT-NUMBER: 20010001661
PGPUB-FILING-TYPE: new-utility
DOCUMENT-IDENTIFIER: US 20010001661 A1

TITLE: Methods for delivering DNA to the bloodstream using recombinant adeno-associated virus vectors

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | Claims | KWIC | Draw Desc | Image

☐ 3. Document ID: US 6335011 B1

L4: Entry 3 of 9 File: USPT Jan 1, 2002

US-PAT-NO: 6335011
DOCUMENT-IDENTIFIER: US 6335011 B1

TITLE: Methods for delivering DNA to muscle cells using recombinant adeno-associated virus virions to treat lysosomal storage disease

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | Claims | KWIC | Draw Desc | Image

☑ 4. Document ID: US 6306830 B1

L4: Entry 4 of 9 File: USPT Oct 23, 2001

US-PAT-NO: 6306830
DOCUMENT-IDENTIFIER: US 6306830 B1

TITLE: Gene therapy for congestive heart failure

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | Claims | KWIC | Draw Desc | Image

☐ 5. Document ID: US 6281200 B1

L4: Entry 5 of 9 File: USPT Aug 28, 2001

US-PAT-NO: 6281200
DOCUMENT-IDENTIFIER: US 6281200 B1

TITLE: Functional characterization of the C-C chemokine-like molecules encoded by molluscum contagiosum virus types 1 and 2

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | Claims | KWIC | Draw Desc | Image

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☐ 6. Document ID: US 6211163 B1

L4: Entry 6 of 9 File: USPT Apr 3, 2001

US-PAT-NO: 6211163
DOCUMENT-IDENTIFIER: US 6211163 B1

TITLE: Methods for delivering DNA to the bloodstream using recombinant adeno-associated virus vectors

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | Claims | KWIC | Draw Desc | Image

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☐ 7. Document ID: US 6165754 A

L4: Entry 7 of 9 File: USPT Dec 26, 2000

US-PAT-NO: 6165754
DOCUMENT-IDENTIFIER: US 6165754 A

TITLE: Method of expressing an exogenous nucleic acid

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | KWIC | Draw Desc | Image

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☐ 8. Document ID: US 5962313 A

L4: Entry 8 of 9 File: USPT Oct 5, 1999

US-PAT-NO: 5962313
DOCUMENT-IDENTIFIER: US 5962313 A

TITLE: Adeno-associated virus vectors comprising a gene encoding a lyosomal enzyme

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | KWIC | Draw Desc | Image

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☑ 9. Document ID: US 5858351 A

L4: Entry 9 of 9 File: USPT Jan 12, 1999

US-PAT-NO: 5858351
DOCUMENT-IDENTIFIER: US 5858351 A

TITLE: Methods for delivering DNA to muscle cells using recombinant adeno-associated virus vectors

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | KWIC | Draw Desc | Image

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Terms	Documents
l1 with l2	9

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